

Example #16: A 6.0 volt motor is used to winch a 0.056 kg mass a vertical distance of 0.65 m in 5.62 sec. What current will the motor draw?

→ use $P = IV$

↳ must find power first

$$P = \frac{\Delta E}{t} = \frac{mg\Delta h}{t}$$

$$= \frac{.056(9.8)(.65)}{5.62}$$

$$= 6.35 \times 10^{-2} \text{ W}$$

$$I = \frac{P}{V} = \frac{.35672}{6.0}$$

$$I = 1.06 \times 10^{-2} \text{ A}$$